REMARKS

Claims 21-25, 27-36 and 38-45 are all the claims pending in the application. An Amendment under 37 C.F.R. § 1.111 was filed on May 15, 2008 and claims 28-31, 42 and 43 wee amended.

Claim Rejections - 35 USC § 102

Claims 21, 22, 31, 32, 36, 38-40, 42 and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Kwon et al. in Loading Effect Parameters at Dry Etcher System and Their Analysis at Mask-to-Mask Loading and Within-Mask Loading, SPIE Vol. 4562 pp. 79-87 (hereinafter, Kwon). This rejection is traversed for at least the following reasons.

Claims 21 and 39

In traversing the rejection of independent claims 21 and 39, and the claims that depend therefrom, the Applicant argued that Kwon does not teach etching at a power level below that which causes a jump in plasma density.

Applicant made a strong assertion that there is no discussion that a plasma density jump might or might not take place in Kwon et al.

Applicants also asserted that, contrary to the Examiner's position, the occurrence of a plasma density jump is not simply present based upon the existence of a given level of plasma source power and a given level of chamber pressure, but depends greatly on the environment of generating plasma, namely, the configuration and a size of an etching apparatus. Thus, even if a source power between 140 and 250 watts and a pressure between 9 and 16 mTorr are disclosed in Kwon et al, there is no basis for concluding that a plasma density jump actually occurs or not. There is no information given as to the other significant parameters related to the existence or not of a plasma density jump. One skilled in the art would know that, where etching apparatuses are of different size and configuration from each other, the plasma density is largely varied, even if the plasma source power are equal in both etching apparatuses.

Applicants also asserted that one skilled in the art could not know from the disclosure in Kwon et al whether the plasma excitation power is lower or higher than plasma excitation power at which the plasma density jump occurs.

In support of these assertions by Applicant, the Declaration of Yasuki Kimura is respectfully submitted. The Declaration was not available at the time the Amendment was filed and is now

being submitted. Applicants respectfully submit that the prior Amendment was fully responsive and further submits that the present Declaration is filed and entered as evidence to be considered by the Examiner in evaluating the Applicant's assertions, as noted above.

Claim Rejections - 35 USC § 103

Claims 23-25, 27, 28, 30, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwon, as applied above to claims 28 and 39, in view of Oh et al. in Proc. SPIE Vol. 4186, pp. 532-539, Dry Etching Technology of Cr and MoSi Layers Using High-Density Plasma Source (hereinafter, Oh). This rejection is traversed for at least the following reasons.

Kwon is deficient, as supported by the Declaration of Kimura. The Examiner further admits that Kwon does not teach biasing the substrate by applying a high frequency power. The Examiner looks to Oh for additional details regarding the apparatus that is used by Kwon, particularly at page 81 of Kwon and Kwon's reference 5.

Oh does not remedy the basic deficiencies of Kwon with regard to using a plasma excitation power lower than the plasma excitation power of generating the plasma density jump as regards to claims 21 and 39. Further, Oh does not render the amended recitation in claims 31 and 43 obvious.

Thus, the parent claims and the above rejected dependent claims would be patentable of Kwon in view of Oh.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kwon in view of Oh, as applied above to claims 28, in view of US Patent 4,613,401 issued to Hoshino and further in view of US Patent 6,913,706 issued to Yan et al. (hereinafter, Yan). This rejection is traversed for at least the following reasons.

Kwon is deficient, as supported by the Declaration of Kimura. The Examiner admits that the combination of Kwon and Oh does not teach adding an organic gas to the etchant. The Examiner looks to Hoshino for a teaching of adding ethanol vapor to a plasma etching gas when etching Cr. The Examiner further looks to Yan for a teaching that chromium-oxychloride is produced when Cr is plasma etched with Cl2 and 02 (column 2, lines 22-24).

Neither Hoshino or Yan make up for the deficiencies of Kwon, alone or in combination with Oh.

Claims 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwon, as applied above to claim 32, in view of US Patent 4,613,401 issued to Hoshino and further in view of Yan. This rejection is traversed for at least the following reasons.

The foregoing comments would apply to overcoming this rejection as well.

Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kwon, as applied above to claim 40, in view of Zhang (6,989,603). This rejection is traversed for at least the following reasons.

Kwon is deficient, as supported by the Declaration of Kimura. The Examiner further admits that Kwon does not teach a mask comprising an optical proximity correction pattern and looks to Zhang for such teaching. However, Zhang does not remedy the deficiencies of Kwon and, thus, the dependent claim would be patentable for reasons already given.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

/Alan J. Kasper/

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Alan J. Kasper
Registration No. 25,426

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